

### Abstract

A method for monitoring hydrogen gas and a hydrogen flame wherein an object light having a wavelength of about 309 nm and resulting from two or more laser beams, which have been irradiated to a space to be monitored, is collected and converted to an electronic image, and the electronic image is amplified and converted back to an optical image, thereby imaging a spatial intensity distribution of light at a specific wavelength. A device for monitoring hydrogen gas and a hydrogen flame, which comprises two or more laser beam sources, means for collecting an object light having a wavelength of about 309 nm and resulting from laser beams, which have been irradiated to a space to be monitored, image producing means for converting the object light to an electronic image, amplifying the electronic image, and converting back the amplified electronic image to an optical image, and means for imaging a spatial intensity distribution of light at a specific wavelength.